

Recycler Shutdown Schedule

Cons Gattuso

Shut Down Goals

- Improve emittance growth rate
- Improve the vacuum instrumentation and diagnostics in order to better understand the vacuum
- Complete the installation of bake out heaters to provide bake out capability for the the whole ring

Description Vacuum Work

- Remove/Reinstall Heater Tape from 18 magnets
- Install Heater Tape in 60 Quad magnets
- Install Stochastic Cooling tank
- Replace approx 170 feet of beam pipe in the 620 Region
- Install Flying Wires at Q619 and Q620
- Install isolation valves around the Flying Wires
- Ion pump upgrade of remaining 5 vacuum sectors
- Installation of pneumatic gate valve at Q503 location
- Remove IPM from Q404 and Q405
- Install Ion gauge at the following locations
 - 101,227,305,307,403,522,623
- Install Ion pump at the 319 location
- *Install RGA's in the 20, 40 and 50 house

Installation Of Additional Vacuum Equipment

- **Cable pulls**

- 503-gate valve
- Isolation valves around the Flying Wires
- IG 101
- IG 227
- IG 305
- IG 307
- IP 319
- IG 403
- IG 522
- IG 623

Install Remote readable RGA at the 20, 40 and 50 house

Other Shutdown/Tunnel Activities

● Power Outages

- Site Wide: Three 15 Min outages planed
- Main Injector Service Building outages
 - Completed:
 - MI40, MI50, MI52, MI60
 - Scheduled:
 - MI62*, MI10, and MI20

● E-cool Construction Tie in

- A 8 by 8 foot tunnel will be tied in MI tunnel at the 307 location.
- Cable Conduit feed thru

● NuMI installation

- Shield wall Removal
- Stand installation
- Magnet installation
- Cables pulls

● Main Injection

8/19/03 Instrumentation Relocation from the 600 to the 300 section

Show the Overall Plan



Management Structure

Recycler Shut Down

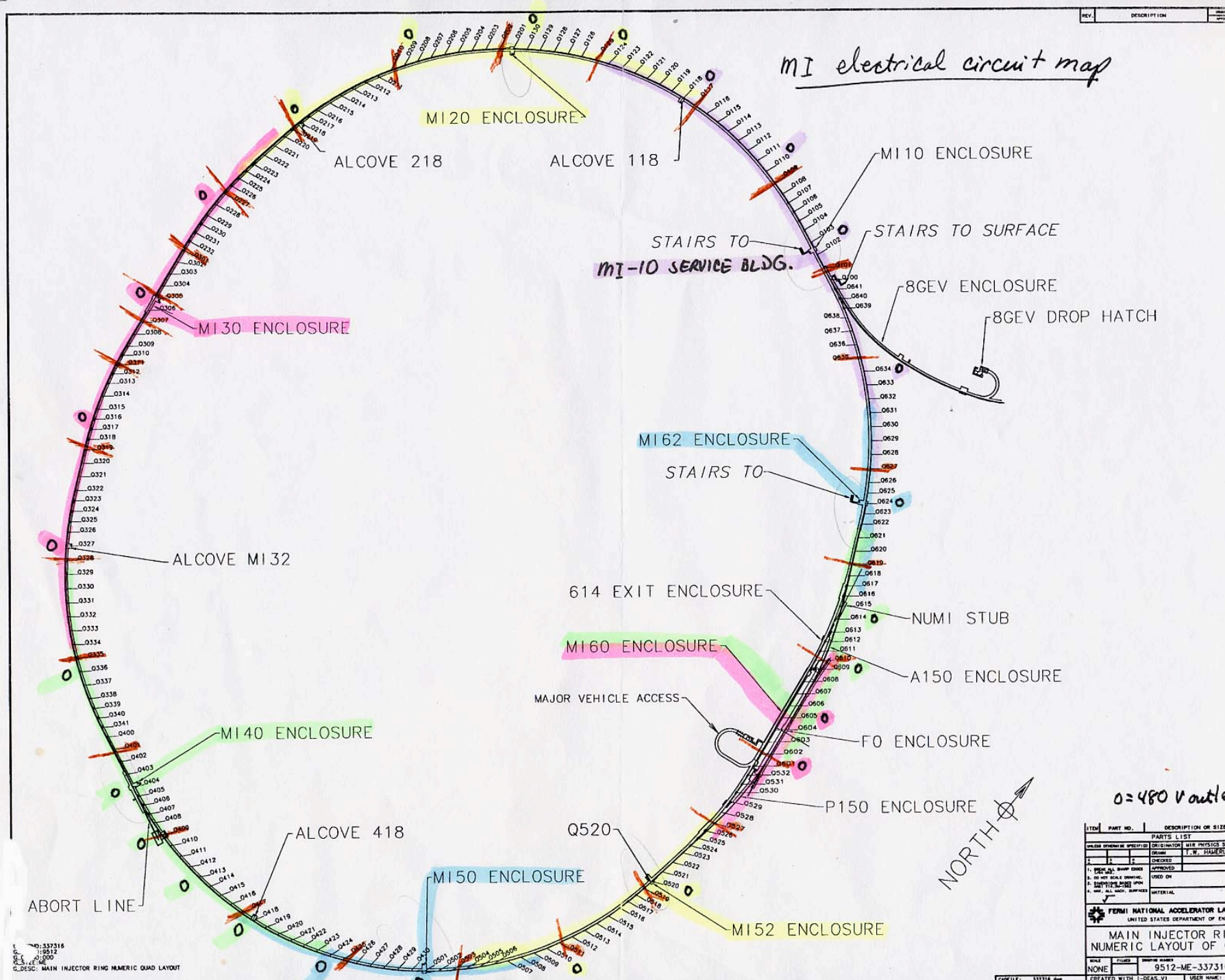


Man Power Needed

Man Power needs:

		Total
Rigging Crews:	2 Crews of 3 Techs	6
Baking Crews:	6 Crews of 5 Techs	30
Installation Crew:	1 Crew of 5 Techs	5
Staging Crews:	1 Crew of 4 Techs	4
Welders Crews:	2 Crews of 2 (welder & helper)	4
Electrical Crews:	1 Crew of 3 Techs	3*
Alignment Crews:	1 Crews (laser and optical)	
Bore Scooping:	1 Crew of 2 (from RR Dept)	

Total
49 + over head



RR20 Crew work

8/19/03

10

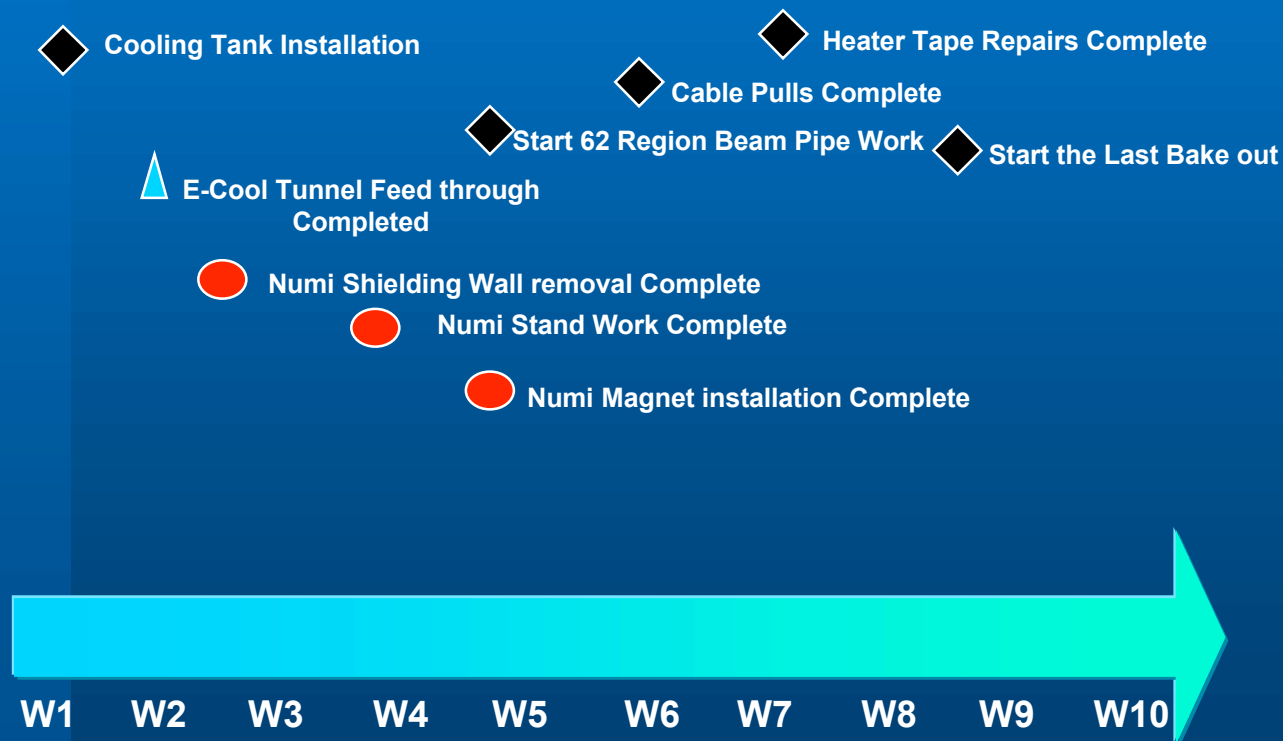
Procedures

● Traveler

- Magnet Removal/Reinstallation Procedure
 - Document is completed
- Bake out setup/Brake down Procedure
 - Draft Version 90% completed
- Ion pump Upgrade Procedure
 - Document is completed
- Shielding Removal/Installation Procedure
 - Document is completed
- Heater Tape Installation Procedure
 - Document is completed

Schedule

● High-Level Schedule Milestones



8/19/03

Progress Tracking

- **Division Level**
 - Meeting held M/W/F 0900
 - Progress update
 - Scheduling shared resources
- **Recycler Project Level**
 - Daily Reports from Crew leaders
 - Daily tunnel tours

Risk Management Issues

- **Scope Creep**

- Unforeseen effects
- Failure of Equipment
- Ect

- **Schedule Interferences**

- NuMI installation
- Main Injector
- Shared Resources

- **Skill Level of Resources**

- ?????????

Current Status Installation Components

- **Cooling Tank Repairs**

- Repairs complete ready for installation

- **Flying Wire Repairs**

- Mechanical issue with feed through

- **Ion Pump Upgrade**

- 18 of the 27 assemblies have been completed

- **Replacement Beam Pipe in 618-623**

- New Gate valves: Ready for installation
- Beam Pipe: Ready for installation
- BPM Assemblies: Final leak check underway

